

WHAT IS CLAIMED IS:

1. A redundant information processing system in which each of three or more processing devices (1A, 1B, 1C) performs predetermined information processing based on a signal from common signal output means (4) to generate control information, and from pieces of the control information, control information is decided by a logical decision to control a common control object (5),

each of said three or more processing devices comprising:

a transmission permitting part (2) which is adapted to collect the results of information processing in the process of generating said control information by said three or more processing devices, and to decide by the logical decision that the control information generated by which processing device is valid; in the case where control information generated by said two or more processing devices including said relevant processing device among said three or more processing devices are valid, said transmission permitting part (2) being adapted to output a control information transmitting signal when said valid processing device has the highest priority among the processing devices with the valid control information according to predetermined priorities or not to output the control information transmitting signal when said valid processing device does not have the highest priority, while outputting a control information blocking signal to each of the processing devices other than the processing devices with the valid control information; and in the case where the control information generated by the other processing devices except said relevant processing device among said three or more processing devices is valid, said transmission permitting part (2) being adapted not to output the control information transmitting signal and not to output the control information blocking signal to the other processing devices.

2. The redundant information processing system according to claim 1

wherein each of said three or more processing devices further comprises a logical computing part (3) which is adapted to input said control information blocking signal from the other processing devices except said relevant processing device among three or more processing devices; and in the case where the number of inputs of the control information blocking signal is less than a predetermined number made valid by said logical decision and said transmission permitting part of said processing device outputs said control information transmitting signal, said logical computing part being adapted to output the control information generated by said processing device to said control object; and in the case where the number of inputs of said control information blocking signal is more than said predetermined number, said logical computing part being adapted not to output control information generated by said processing device to said control object even if said transmission permitting part of said processing device outputs said control information transmitting signal.

3. The redundant information processing system according to claim 2 wherein said logical computing part is comprised of logical computing elements and is constituted by a combination circuit (3) without feedback loop.

4. The redundant information processing system according to claim 2 or 3 wherein, in the case where said processing device uses past control information in the process of generating said control information,

said processing device other than processing devices with valid control information rewrites the generated control information to control information of the processing device with valid control information, and uses the rewritten control information for the next process of generating control information.

5. The redundant information processing system according to any of claims 1 or 4 wherein the processing procedures of the logical decision made by said transmission permitting parts of said three or more processing devices

are common to one another.

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